

Duhaldea cappa (BUCH.-HAM. ex D. DON) PRUSKI & ANDERBERG (Compositae: Inuleae), a nomenclatural correction

JOHN F. PRUSKI¹ & ARNE A. ANDERBERG²

¹ Missouri Botanical Garden, P.O. Box 299, St. Louis, MO 63166-0299, USA

² Swedish Museum of Natural History, Department of Phanerogamic Botany,
Box 50007, SE-104 05 Stockholm, Sweden

Abstract

The name "*Duhaldea cappa* (DC.) ANDERBERG" is invalid, and a new combination is provided for this common Old World species centered in the Himalayas. The name "*Duhaldea eupatorioides* (DC.) ANDERBERG" is an isonym of the earlier *D. eupatorioides* (DC.) STEETZ.

Introduction

In a treatment of tribe Inuleae (Compositae) by the second author (ANDERBERG 1991: p. 104), the name "*Duhaldea cappa* (DC.) ANDERBERG" was intended as a new combination. The basionym was unintentionally not cited, but rather "*Inula cappa* DC." was given. Thus, the intended combination is invalid, does not exist nomenclaturally, and is not correctable (ICBN Art. 33, Ex. 11). The species was treated using the name *Duhaldea cappa* in the Flora of Bhutan (GRIERSON & SPRINGATE 2001), but the needed combination in *Duhaldea* DC. was not validated there. Here we provide a description and a valid combination for this common Asian species of *Duhaldea*, a small genus of 14 species, 13 of which occur in Asia and one in Africa.

Duhaldea DC. is typified by *D. chinensis* DC., a synonym of *D. cappa* (BUCH.-HAM. ex D. DON) PRUSKI & ANDERBERG. *Duhaldea* includes the synonymous *Amphirhapis* DC. (ANDERBERG 1991) and *Inula* sect. *Cappa* DC. (STEETZ 1857), the latter into which CANDOLLE (1836) originally placed *D. cappa* and four other species (*Inula* species numbers 29–33). The first of these species listed by CANDOLLE is *D. eupatorioides* (DC.) STEETZ (isonym *D. eupatorioides* (DC.) ANDERBERG), which was recognized by ANDERBERG (1991) as a good species. The three other original species of *Inula* sect. *Cappa* are treated here as synonyms of *D. cappa*, and include *Inula eriophora* DC., *I. oblonga* DC., *I. pseudocappa* DC. CANDOLLE (1836) and STEETZ (1857) cited three

WALLICH catalogue numbers [2992, 3013 (cited incorrectly by CANDOLLE as "2013"), and 3014; the two latter are type collections] in treating species in the *D. cappa* group. An unnumbered WALLICH collection of *D. cappa* in MO (sheet # 5384321!) surely represents one of these three WALLICH catalogue numbers, but at present cannot with certainty be assigned to any one of them.

Thirteen species other than *Duhaldea* (née *Conyza*) *cappa* are recognized in *Duhaldea*. These species were transferred to *Duhaldea* from *Inula* (STEETZ 1857, ANDERBERG 1991, DAWAR & QAISER 1999), and include two species originally described in *Amphirhapis*. *Duhaldea* is technically distinguished from *Inula* L. by polarized (vs. radial) endothelial tissue in the anthers, ridged (vs. smooth) receptacles, and truncate to rarely acute (vs. acute) anther appendages (ANDERBERG 1991, cf. Fig. 2 in DAWAR & QAISER 1999). Another characteristic of *Duhaldea* is that many species tend to have marginal pistillate florets with tubular corollas with small or very reduced limbs; the capitula are thereby commonly disciform or inconspicuously radiate. Additionally, all species of *Duhaldea* have stems that lack resin canals (ANDERBERG 1991).

***Duhaldea cappa* (BUCH.-HAM. ex D. DON) PRUSKI & ANDERBERG, comb. nov.**

Basionym: *Conyza cappa* BUCH.-HAM. ex D. DON, Prodr. Fl. Nepal. 176. 1825. *Inula cappa* (BUCH.-HAM. ex D. DON) DC., Prodr. 5: 469. 1836. *Duhaldea chinensis* var. *cappa* (BUCH.-HAM. ex D. DON) STEETZ, Bonplandia 5: 308. 1857. **Type:** Nepaliae superioris, ad Suembu, s. d., F. HAMILTON s. n. (holotype: BM n. v.).

Perennial herbs to shrubs, 0.5–1 (–2) m tall; stems erect, few-branched, subterete, often distally lanate to proximally puberulent, sometimes aromatic, soft and easily broken. **Leaves** simple, alternate, spread evenly along distal half of stems; petioles stout, 4–8 (15) mm long; blades progressively reduced in size distally, elliptic-lanceolate to oblanceolate, usually about (4) 8–15 (20) cm long, usually about 1.5–4 cm wide, stiffly chartaceous, venation pinnate, third order veins sometimes obscured by pubescence, base cuneate to rounded, margins distally serrulate to nearly entire, apex acute to acuminate, the adaxial surface finely sericeous, the abaxial surface usually sericeous to lanate. **Capitulescence** terminal, sometimes also lateral from uppermost nodes on axillary branches commonly 2–3 cm long, corymbiform, sometimes densely so, commonly with 20–50 or more capitula; peduncles stout, lanate, usually 2–5 mm long. **Capitula** inconspicuously radiate or disciform, ca 30-flowered, to ca. 8 mm high; involucre cylindrical to turbinate; phyllaries 5–6-seriate, imbricate, graduate, outer ones elliptic-lanceolate, ca. 1.5 mm long, scarious or with an herbaceous apex, densely pubescent, grading to inner ones lanceolate, 4.5–5.5 (–6) mm long, scarious, stramineous, apically pubescent; receptacle flat, epaleate, foveolate with minute irregular ridges. **Marginal (ray) florets** pistillate 1(–2)-seriate; corollas cream-colored or yellowish, 3–4 (–5) mm long, apically glandular, limb often ca. 0.5 mm long, indistinct, less commonly lacking or to ca. 2 mm long. **Disk florets** bisexual; corollas

yellowish, tubular-funnelform, 4–5.5 mm long, lobes ca. 0.5 mm long, apically glandular; anthers weakly exerted, tailed, endothelial tissue polarized, apical appendage truncate; style branches ca. 1 mm long. Achenes obconical, 1.2–1.5 mm long, sericeous; pappus of ca. 12 scabrid or barbellate, subequal, stramineous bristles in a single series, 4–4.5 mm long, about as long as the corolla.

Distribution and Ecology: *Duhaldea cappa* (BUCH.-HAM. ex D. DON) PRUSKI & ANDERBERG is relatively common in dry open areas of the temperate regions of the Himalayas from 1800–3000 m in elevation, where it is usually a perennial herb less than one meter tall flowering in the summer and fall (YESHEY DORJI, pers. comm.). The species is increasingly less common and becomes shrubby at lower elevations (to ca. 450 m) in adjacent subtropical areas of southeastern Asia. *Duhaldea cappa* was described from material collected in Nepal, and is also known to us from Bhutan, China, northern India, Myanmar (Burma), Thailand, and Vietnam. It is cited as also occurring in Malaysia and Java (MANANDHAR 2002), however, perhaps only occurring there in cultivation.

Uses: *Duhaldea cappa* (BUCH.-HAM. ex D. DON) PRUSKI & ANDERBERG is occasionally collected at elevations below 3000 m in the Himalayas and used as a substitute forage plant for horses during overnight excursions to higher elevations (YESHEY DORJI, pers. comm.). MANANDHAR (2002) listed several medical uses for various parts of the plant, including use in treating ulcers, indigestion, headaches, fever, and menstrual disorders. Lastly, the species is one of many species “used to make marcha, a fermenting cake from which liquor is distilled” (MANANDHAR 2002).

Acknowledgements

We thank NEIL HARRIMAN for originally noting the invalid name and JIM SOLOMON for bringing it to our attention. YESHEY DORJI, BERTIL NORDENSTAM, and JAN SALICK are thanked for their valuable comments on an earlier draft of this note.

References

- ANDERBERG, A. A. 1991. Taxonomy and phylogeny of the tribe Inuleae (Asteraceae). *Pl. Syst. Evol.* 176: 75–123.
- CANDOLLE, A.P. DE 1836. *Prodromus systematis naturalis regni vegetabilis*, Vol. 5. Treuttel & Wurtz, Paris.
- DAWAR, R. & M. QAISER 1999. A new combination in *Duhaldea* (Compositae-Inuleae). *Adansonia*, sér. 3, 21: 323–326.
- DON, D. 1825. *Prodromus florae nepalensis*. Gale, London.
- GRIERSON, A. J. C. & L. S. SPRINGATE 2001. Compositae. Pp. 1397-1632. In: GRIERSON, A. J. C. & D. G LONG, *Flora of Bhutan*, Vol. 2, Part 3. Royal Botanic Garden, Edinburgh & The Royal Government of Bhutan.
- MANANDHAR, N. P. 2002. *Plants and People of Nepal*. Timber Press, Portland.
- STEETZ, J. 1857. *Duhaldea Chinensis*, DE CAND.: Ein Beitrag zur Systematik der Compositae. *Bonplandia* 5: 305–310.